

REMARKS

Upon entry of the present Amendment-C the claims in the application are claims 1, 2, 4-10 and 13-15, of which claims 1, 4, and 5 are independent.

Amendments

Claim 1 has been amended to incorporate variations of the features of claim 11 (now cancelled); Claims 4 and 5 are rewritten in independent form, including all of the limitations of claim 3 (now cancelled) from which they formerly depended; claims 9, 10 and 13-15 are amended to overcome minor informalities pursuant to the Examiner's suggestion; and claims 8, 9 are amended to be consistent with amended claims 4, 5. The specification is amended to overcome a minor inconsistency noted by the Examiner.

Applicant respectfully submits that all of the above amendments are fully supported by the original application. Applicant also respectfully submits that the above amendments do not introduce any new matter into the application.

Allowable Subject Matter

Additionally, applicant gratefully acknowledges the Examiner's indication that claims 4-7 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim, as set forth at item 10 of the Office Action. In light of the above amendment to claims 4 and 5, it is believed that claims 4-9 are in allowable form, noting that claims 6-9 all depend from either claim 4 or 5.

Objections

The above amendments to claims 9 and 13-15 (as well as cancellation of claim 12), and the amendment to the specification are believed to directly overcome the Examiner's objections

presented at items 2, 3 of the Office Action. Accordingly, it is respectfully requested that the objections be reconsidered and withdrawn.

Claim Rejections – 35 USC 112

The above amendments to claim 10 is believed to directly overcome the Examiner's rejection of this claim under 35 USC 112, first paragraph, presented at item 4 of the Office Action. Accordingly, it is respectfully requested that the rejection be reconsidered and withdrawn.

Claim Rejections – 35 USC 102

At item 6 of the Office Action, the Examiner has rejected claims 1-2, and 10-16 under 35 USC 102(e) as being anticipated by Baba et al (US 6,684,973). With respect to claims 1 and 2, it is the Examiner's position that Baba discloses a side airbag unit including a side airbag 7 a posture detector (4-5), which determines a posture of said occupant, a weight detector (2), which measures the weight (V_{LOAD}) of said occupant, and a deployment controller, which controls the deployment of said airbag based on the posture and weight of the occupant, wherein, the deployment controller (4) allows the deployment of the airbag irrespective of the posture of the occupant (Fig.6, cols. 5-6), when the weight measure by the weight detector exceeds threshold value ($V_{LOADREF1}$). With respect to claim 10, it is the Examiner's position that Baba discloses a side airbag, wherein, the posture detector comprise a means for discriminating between small and large occupants. With respect to claims 11-16, it is the Examiner's position that Baba discloses a side airbag wherein the posture detector monitors a pattern, the pattern of signal output from a plurality of sensors on the seat back and estimates the occupant's posture based on a profile of the pattern; wherein, the output from the posture detector is categorized, and the controller controls the airbag based on the category of the output of the posture detector, the output from the weight detector is categorized, and the controller

controls the airbag based on the category of the output of the weight detector.

Applicant's Response

Upon careful consideration and in light of the above amendment to claim 1, applicant respectfully traverses such rejection, and submits that claims 1-2, and 10-16 are clearly patentably distinct over Baba as the rejection is applied to the presently amended claims, since the reference does not disclose (or suggest) all of the features required therein.

For example, Baba does not disclose a side air bag unit associated with an occupant posture detector and an occupant weight detector as defined in claim 1, and wherein the posture detector includes a plurality of sensors positioned along the seat back, monitors a pattern of signal output from the sensors, and monitors the occupant's posture based on a profile of the pattern, as now defined by claim 1.

Rather, Baba discloses sequential sampling of the antenna electrodes of the seat back, and then calculation of the average voltage output over the electrode array. Possible output values are categorized into low, medium or high voltage states wherein a high value would correspond to an adult sitting on the seat, and a medium value would correspond to a child sitting on the seat. This contrasts with the claimed invention, in which the occupant's posture is determined from the pattern or profile of activity of the antenna electrodes, e.g., as determined from sequential sampling of the antenna electrodes of the seat back.

Further, it is noted that Fig. 2 of Baba relates to a *front* airbag, not a side airbag unit as claimed. Although Baba discloses a side airbag 7' in his third embodiment (Fig. 13), the third embodiment does not include plural antenna electrodes positioned along the seat back.

As regards claim 2, applicant respectfully submits that Baba does not disclose a controller which permits deployment of the airbag irrespective of the posture of the occupant when the weight measured by the weight detector exceeds a threshold value. Rather, in relation to his Figure 6, Baba discloses controlling the deployment of the airbag based on the posture of the occupant for cases when the weight measured by the weight detector exceeds a threshold value. That is, as shown in his Fig. 6, in states 1-9 the weight measured is determined to be high, as is determined when the weight exceeds the threshold ($VLOAD > VLOADREF1$) (col. 5, lines 10-20). For states 1-9 (weight = high), the average output voltage obtained from the antenna electrodes (which reflects the posture of the occupant) are shown to range from high to low, and the permission state for deployment of the airbag is "on" for average output voltage values of high (see states 1-3), and is "off" for average output voltage values of medium or low (see states 4-9). Thus, Baba does not disclose allowing the deployment of the airbag irrespective of the posture of the occupant, as claimed.

In view of the foregoing, amended claim 1 is clearly patentably distinct from the invention as disclosed by Baba, therefore applicant respectfully requests reconsideration and withdrawal of the rejection of present claims 1, 2 and 13-15 which depend therefrom, under 35 USC 102(e) as being anticipated by Baba.

Claim Rejections – 35 USC 103(a)

At item 8 of the Office Action, the Examiner rejected claim 3 and 8-9 under 35 USC 103(a) as being unpatentable over Baba et al. in view of Sakai et al (US 6,253,133). In the rejection of claim 3, the Examiner states that Baba discloses a side airbag system comprising a side airbag 7, a posture detector (4-5), a weight detector (2), and a deployment controller wherein the posture

detector includes a plurality of first sensors (3-6 to 3-10) placed on the seat back and lined up at regular intervals in the up/down direction of the seat back. The Examiner states that Baba fails to disclose the airbag as provided on one side of the seat back, and fails to disclose a posture detector which includes a second sensor placed on one side of the seat back, but that Sakai teaches providing an airbag on one side of a seat back, and a posture detector which includes first and second sensors Ats1, Ats2, the second sensor Ats2 being placed on one side of the seat back. The Examiner considers that it would have been obvious to modify the side airbag of Baba as taught by Sakai to include the side airbag on one side of the seat back, and modify a posture detector to include a second sensor on one side of a seat back so as to eliminate the possibility of a failure of detection and ensure high precision and reliability in detecting the passenger's normal posture.

Applicant's Response

Upon careful consideration, applicant respectfully traverses such rejection based on the foregoing arguments regarding the merits of amended claim 1, which are not overcome by the additional teachings of Sakai et al., and because neither reference discloses or suggests features of the claimed invention set forth in the dependent claims. As discussed above, the embodiments of Baba upon which the Examiner has indicated the rejection is based do not pertain to a side airbag as the Examiner suggests, but instead discloses a front airbag.

Further, applicant respectfully submits that it would not have been obvious to hypothetically modify Baba's system in the manner proposed by the Examiner based on the actual teachings of the references, i.e., to place the front airbag of Baba in the at the side of a vehicle seat as disclosed by Sakai, since Baba teaches away from these modifications by maintaining two separate embodiments. In particular, applicant respectfully submits that it would

not be obvious to persons skilled in the art to place the front airbag of Baba at the side of the vehicle seat as disclosed by Sakai, or that it would be obvious to provide a second sensor on one side of a seat back of Baba as disclosed by Sakai since Baba teaches away from these modifications by maintaining two separate distinct embodiments. Specifically, a first embodiment is disclosed in which the central array of posture sensing electrodes on a seat back is used with a front air bag and without a second sensor at the side of the seat, and a second embodiment is disclosed in which a sensor is used at the side of the seat with a side airbag and without the central array. Baba does not disclose or suggest combining the two embodiments, and the teachings of Sakai do not add additional features not already disclosed by Baba.

Notwithstanding the foregoing, in an effort to expedite prosecution of the present application, applicant has cancelled claim 3, and incorporated its features into claims 4-5 as discussed above, such that the rejection under 35 USC 103(a) is believed to be overcome.

Other matters

Applicant has considered the additional references cited by the Examiner on the Form PTO-892 attached to the Office Action, Hamada et al., Kuboki et al., Blakesley, Breed et al., Stanley, and Bech et al. but it is respectfully submitted that these additional references fail to overcome the deficiencies of Baba relative to the claimed invention as discussed above.

Conclusion

In conclusion, applicant has overcome the Examiner's rejection of claims 1-3 and 8-16 as presented in the Office Action; the Examiner has indicated claims 4-7 will be allowed; and moreover, applicant has considered all of the references of record, and it is respectfully submitted that the invention as defined by each of the presently amended claims is clearly patentably

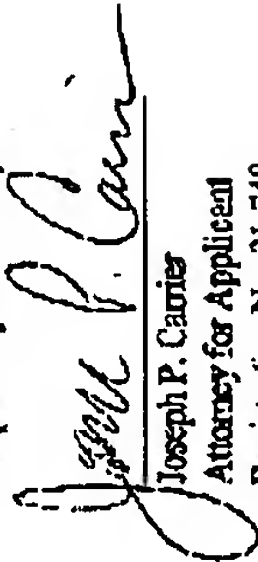
distinct thereover.

The application is now believed to be in condition for allowance, and a notice to this effect is earnestly solicited.

If the Examiner is not fully convinced of all of the claims now in the application, applicant respectfully requests that the Examiner telephonically contact applicant's undersigned representative to expeditiously resolve prosecution of the application.

Favorable reconsideration is respectfully requested.

Respectfully submitted,

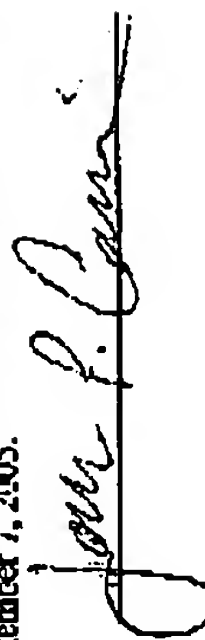

Joseph P. Carrier
Attorney for Applicant
Registration No. 31,748
(248) 344-4422

Customer No. 21828
Carrier, Blackman & Associates, P.C.
24101 Novi Road, Suite 100
Novi, Michigan 48375
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